

LVI.—A new *Termitophilous Collembolan* from West Africa.
By JAMES MEIKLE BROWN, B.Sc., F.L.S., F.E.S.

AMONGST a quantity of Apterygota material very kindly forwarded to me for determination by Mr. P. A. Buxton, F.E.S., of Cambridge, was a tube containing six specimens of a species of *Cyphoderus* obtained in a nest of termites in Sierra Leone. As the species proves to be new, it is described in the present paper.

Cyphoderus burtoni, sp. n.

Abdomen IV. about $2\frac{1}{2}$ times the length of abdomen III. Antenna $1\frac{1}{2}$ times the length of the head. Proportional lengths of the antennal segments approximately as 1 : 3 : 2 : 4. Eyes absent.

Tenent-hair of foot distinctly clubbed and not quite as long as the claw. Claw of foot $\frac{2}{3}$ the length of the mucro of the spring, with a small indistinct inner tooth about the middle of the margin, in addition to the usual pair of large basal teeth.

Empodial appendage ("lower claw") about $\frac{2}{3}$ the length of the claw, with a large broad outer tooth (fig. 1).

Dentes of spring each with two rows of ribbed dorsal scales, five inner and seven outer, of which the distal outer scale projects slightly beyond the apex of the mucro, and the distal inner scale is nearly twice the length of the mucro (fig. 2). Manubrium $1\frac{1}{2}$ times the length of the dens; dens $3\frac{1}{2}$ times that of the mucro. Mucro with slightly curved ventral edge, and, in addition to the small apical tooth, with three dorsal teeth, the two more distal ones approximately equal and in the distal third of the mucro, the third small and placed about $\frac{1}{3}$ from the base of the mucro (fig. 3).

Colour white.

Size 1.2 mm.

In the nest of termites (see below), Sierra Leone, West Africa (*P. A. Buxton*, 19. vi. 1917).

Types in the British Museum (South Kensington).

Cyphoderus burtoni differs from most of the described members of the genus in having seven outer dorsal dental scales, the usual number being six (Borner, 1913). The fork (spring) of one specimen was abnormal, the right dens carrying eight outer dorsal scales and the corresponding mucro having no small basal tooth; the left dens and mucro were normal.

A noteworthy feature is the presence of three dorsal teeth to the mucro. This character occurs in two species described by Wahlgren from Egypt, namely, *C. arcuatus* and *C. termitum*. From *C. arcuatus* our species differs, among other characters, not only in the general form of the mucro, but in the relative length of the last dental scales and in the proportional lengths of the abdominal segments, and from

Fig. 1.



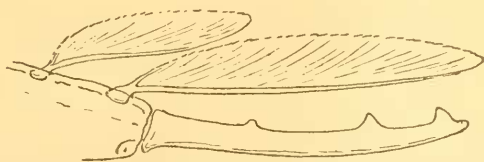
Cyphoderus burtoni, sp. n. Foot, $\times 1200$.

Fig. 2.



Cyphoderus burtoni, sp. n. Right dens and mucro (dorsal view), $\times 530$.

Fig. 3.



Cyphoderus burtoni, sp. n. Right mucro, with last two outer dental scales (side view), $\times 1800$.

C. termitum in the form of the mucro, but especially in the structure of the claw (Wahlgren, 1906).

Species of *Cyphoderus* have been described from various parts of the world, and in nearly all cases living in association with either ants or termites. In our own country the only known species—*C. albinos*, Nic.—frequently occurs in ants'

nests. An exception, however, appears to be in *C. genneseræ*, Carp., described from Galilee, where it was discovered living under stones in a salt-spring (Carpenter, 1913).

Appended are some notes relating to the occurrence of *C. buxtoni* kindly supplied by Mr. Buxton, to whom my thanks are due for giving me the opportunity of examining the material:—

“Freetown, Sierra Leone, 19. vi. 1917.

“*Cyphoderus* collected from a termites' nest, in which they occurred in great numbers. The nest was a hard mud turret 18 inches high on the golf-course, and had been made apparently by *Eutermes suspensus*, Silv., which inhabited it in immense numbers. The nest also contained right in its middle a colony of *Pericapritermes urgens*, Silv., workers, soldiers, and winged sexual forms, and a few *Basidentitermes potens*, Silv., of which I only secured nasutes. The termites have been named by Prof. Silvestri.”

LITERATURE.

- BORNER, C. “Neue Cyphoderinen.” Zool. Anzeig. 1913, p. 274 *et seq.*
 CARPENTER, G. H. “A new Spring-tail from Galilee.” Journ. & Proc. Asiatic Soc. of Bengal (new series), vol. ix. no. 6, 1913, pp. 215–217.
 WAHLGREN, E. “Apterygoten aus Aegypten und dem Sudan.” Results of the Swedish Zool. Exped. to Egypt and the White Nile, 1901. No. 15. Upsala, 1906.

LVII.—On some new Forms of Lichens.

By Prof. Dr. C. MERESCHKOVSKY.

Physcia pulverulenta (Schreb.), Nyl., forma *delicata*, Mer.

Thallus mediocris, *pallide ochroleuco-cinereus*, nudus vel vix pulverulentus, laciniis quasi ut in typo, sed minoribus, tenuioribus, *concretis*, marginibus suberenulatis, centro ad margines *lobulis microphyllinis* munitis. Apothecia *mediocria*, vulgo 1.4–1.8 millim., 2.6 haud superantes, marginibus tenuibus, sæpe foliosis.—Corticola, supra quercus.

Spec. orig. in herb. Conservatorii botanici Genevæ (vide Tabulæ *Physciæ pulverulentæ*).

Loc. Geneva (Helvetia).